

CLAIMS:

1. An optical recording medium comprising a recording layer formed of a phase change material and capable of recording data therein at a linear recording velocity equal to or higher than 10 m/sec, wherein Rtop satisfies the condition that it is larger than $\{11 - (V/5)\}$ and smaller than $\{22 - (2V/5)\}$, where Rtop (%) is a reflectivity of the crystal state of the phase change material forming the recording layer and V (m/sec) is a target linear recording velocity.
- 10 2. An optical recording medium in accordance with Claim 1, wherein Rtop and V satisfy the condition that Rtop is larger than $\{11 - (V/5)\}$ and smaller than $\{20 - (4V/11)\}$.
- 15 3. An optical recording medium in accordance with Claim 1, wherein Rtop and V satisfy the condition that Rtop is larger than $\{11 - (V/5)\}$ and smaller than $\{18.3 - (V/3)\}$.
- 20 4. An optical recording medium comprising a recording layer formed of a phase change material and capable of recording data therein at a linear recording velocity equal to or higher than 10 m/sec and having recording condition setting information related to a linear recording velocity V (m/sec) that should be set when recording data, wherein Rtop satisfies the condition that it is larger than $\{11 - (V/5)\}$ and smaller than $\{22 - (2V/5)\}$, where Rtop (%) is a reflectivity of the crystal state of the phase change material forming the recording layer.
- 25 5. An optical recording medium in accordance with Claim 4, wherein

Rtop and V satisfy the condition that Rtop is larger than $\{11 - (V/5)\}$ and smaller than $\{20 - (4V/11)\}$.

6. An optical recording medium in accordance with Claim 4, wherein

5 Rtop and V satisfy the condition that Rtop is larger than $\{11 - (V/5)\}$ and smaller than $\{18.3 - (V/3)\}$.

7. A method of recording information to an optical recording medium comprising a recording layer formed of a phase change material whose

10 reflectivity is Rtop (%) when it is in a crystal phase, which method records information under the condition that Rtop is larger than $\{11 - (V/5)\}$ and smaller than $\{22 - (2V/5)\}$, where V (m/sec) is a linear recording velocity.

8. A method of recording information to an optical recording medium in accordance with Claim 7, wherein information is recorded under the condition that Rtop is larger than $\{11 - (V/5)\}$ and smaller than $\{20 - (4V/11)\}$.

9. A method of recording information to an optical recording medium in accordance with Claim 7, wherein information is recorded under the condition

20 that Rtop is larger than $\{11 - (V/5)\}$ and smaller than $\{18.3 - (V/3)\}$.